

WHAT IS CLAIMED IS:

1. A method of resin-encapsulating an electronic component mounted on a main surface of a board, using a mold pair having an upper mold and a lower mold, comprising the steps of:  
attaching said board on said upper mold;  
5 generating melted resin in a cavity provided in said lower mold;  
immersing said electronic component in said melted resin by closing said mold pair; and  
forming a resin mold product by setting said melted resin in said cavity.

10 2. The method of resin encapsulation according to claim 1, wherein in said step of generating melted resin, said melted resin is generated by heating a solid resin material placed in said cavity.

3. The method of resin encapsulation according to claim 1, wherein an electrode of said board and an electrode of said electronic component are connected by a conductive material forming a loop in a prescribed plane; and

5 in said step of immersing said electronic component in said melted resin, said prescribed plane moves substantially vertically to a main surface of said melted resin.

4. A method of manufacturing a semiconductor device, using the method of resin encapsulation according to claim 1.

5. A method of resin-encapsulating an electronic component mounted on a main surface of a board, using a mold pair having an upper mold and a lower mold and a solid resin material for resin encapsulation, comprising the steps of:

5 placing said board on said lower mold;  
placing said resin material on a main surface of said board such that

said resin material is not in contact with a conductive material connecting an electrode of said board with an electrode of said electronic component;

closing said mold pair;

10 generating melted resin on the main surface of said board and enclosing said electronic component in said melted resin by heating said resin material; and

forming a resin mold product by setting said melted resin.

6. The method of resin encapsulation according to claim 5, wherein said resin material has such size and shape that correspond to size and shape of said cavity; and

5 said melted resin is generated by heat transmitted from said upper mold to said resin material.

7. The method of resin encapsulation according to claim 5, wherein said resin material is formed such that a space formed by said board and said resin material encloses said electronic component, when said resin material is placed on the main surface of said board; and

5 said space is set to have such a size that said resin material is not in contact with the conductive material connecting the electrode of said board with the electrode of said electronic component.

8. A method of manufacturing a semiconductor device, using the method of resin encapsulation according to claim 5.

9. A solid resin material used as a raw material of melted resin in a method of resin-encapsulating an electronic component mounted on a main surface of a board by setting said melted resin generated in a cavity provided in a mold pair, having such size and shape that correspond to size and shape of said cavity.

10. The resin material according to claim 9, formed such that a space formed by said board and said resin material encloses said electronic

component, when said resin material is placed on the main surface of said board; wherein

- 5           said space is set to have such a size that said resin material is not in contact with the conductive material connecting the electrode of said board with the electrode of said electronic component.

11. The resin material according to claim 9, wherein  
a notch is formed in said resin material.